

(I) PIONEER



ORDER NO. ART-744-0

AUDIO DIGITAL TIMER

MODEL DT-510 COMES IN SIX VERSIONS DISTINGUISHED AS FOLLOWS:

Туре	Voltage	Remarks
KU	120V only	U.S.A. model
кс	120V only	Canada model
S	110V, 120V, 220V and 240V (Switchable)	General export model
S/G	110V, 120V, 220V and 240V (Switchable)	U.S. Military model
YB	240V only	United Kingdom model
NE	220V only	Europe model

• This service manual is applicable to the DT-510/S,S/G. When repairing the DT-510/KU, please see page 11, and for the other types, please refer to the additional service manuals.

CONTENTS

1.	SPECIFICATIONS	2	AD	DITIONAL SERVICE MANUAL (For KU model)	
2.	PARTS LOCATIONS	2	1.	CONTRAST OF MISCELLANEOUS PARTS	11
3.	FRONT PANEL FACILITIES	3	2.	SPECIFICATIONS	11
4.	EXPLODED VIEW	4	3.	PARTS LIST	12
5.	SCHEMATIC DIAGRAMS	5	4.	SCHEMATIC DIAGRAM	13
6.	P.C. BOARD CONNECTION DIAGRAM	7	5.	P.C. BOARD PATTERNS	15
7.	PARTS LIST	9			
8.	PACKING	10			

1. SPECIFICATIONS

Time display	Digital display with fluorescent display tube
Timer type	
	(AM/PM, 12-hour display)
Timer setting	Only one ON/OFF time setting in mininum
	units of minutes within a 24-hour period
Sleep timer	.Setting in minimum units of minutes up to
	1 hour 59 minutes
Time accuracy	Synchronized with line frequency
Timer accuracy	Within \pm 0.1 sec. of time displayed
Sleep timer accurac	yWithin 59 sec. of set time
Power section	
Power requirement	s AC 110V/120V/220V/240V
1 Ovver requirements	(switchable) 50Hz/60Hz (switchable)
A.C. quitlata	Total of 2 outlets, 1,200 W max. capacity
AC oddlets	power (500 W for audio equipment)
Power consumptio	n 6 W

Other functions

- AC OUTLET "on" display (red LED lights)
- Timer operation display (green LED lights)
- Power failure display (time display winks)

Accessories

Operating Instructions1

NOTE

Specifications and design are subject to possible modification without notice due to improvements.

2. PARTS LOCATIONS

* These parts locations are applicable to the DT-510/KU.

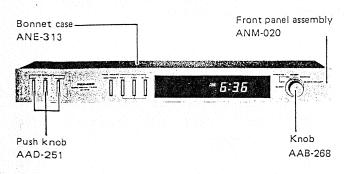
NOTES:

- The A mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .

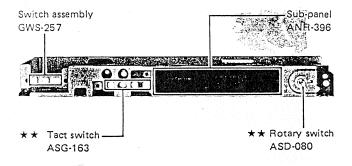
** GENERALLY MOVES FASTER THAN *

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

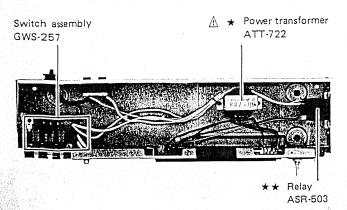
Front Panel



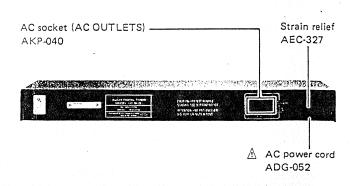
Front View with Panel Removed



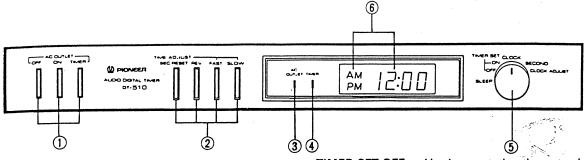
Top View with Bonnet Removed



Rear Panel



3. FRONT PANEL FACILITIES



(1) AC OUTLET SELECTORS

These switch on and off the power flowing to the rear panel AC outlets.

OFF:

Used to switch off the power of the connected audio components regardless of the timer opera-

tion (set times).

ON:

Used to switch on the power of the connected audio components regardless of the timer opera-

tion (set times).

TIMER:

Used to switch ON and OFF the power of the con-

nected audio components with the timer opera-

tion.

② TIME ADJUST SWITCHES

These are used to adjust the time/displayed times in line with the setting of the mode selector.

SEC RESET: When this switch is depressed with the mode selector in the SECOND position, the second display of the present time is reset to #:00 and when released the seconds are counted up from #:00 - #:0 :- #:02 - etc., and the rightmost

minute digit and seconds are displayed.

REV: When the FAST or SLOW switch is depressed

while this switch is in the depressed position, the displayed time is reversed rapidly or slowly. (This function does not work when the sleep timer

function is set.)

FAST: When this switch is depressed, the displayed time

is forwarded rapidly.

SLOW: When this switch is depressed, the displayed time

is forwarded slowly.

③ AC OUTLET INDICATOR (red)

This lights when power is being supplied to the AC OUTLETS on the rear panel.

4 TIMER INDICATOR (green)

This lights when the AC OUTLET-TIMER selector is depressed.

⑤ MODE SELECTOR

This is used to select the timer's function.

SLEEP:

Used to set the operating time (1 minute to 1 hour 59 minutes) until the power of the audio components operating is to be set OFF.

TIMER SET-OFF:

Used to set the time at which the

power to the connected audio com-

ponents is set OFF.

TIMER SET-ON:

Used to set the time at which the power to the connected audio compo-

nent is set ON.

CLOCK:

Used to display the present time (hours

& minutes).

SECOND:

Used to adjust the seconds of the pre-

sent time and check the seconds of the

present time.

CLOCK ADJUST:

Used to adjust the clock to the present

time.

⑥ TIME DISPLAY

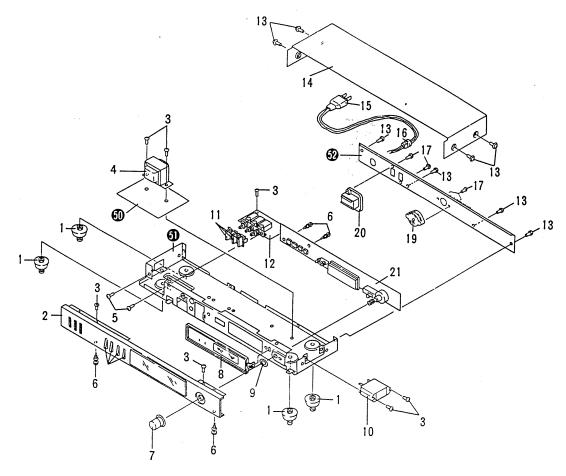
The time is displayed as it relates to the mode selector or TIME ADJUST switch settings in the following table.

Mode selector	TIME ADJUST switch	Display	Example of display
SLEEP	FAST	Time until sleep	I:30
	SLOW	operation is due to go OFF.	1 hr 30 min.
TIMER SET-OFF	FAST SLOW REV	Display of OFF time set by timer.	~ 8:00
TIMER SET-ON	FAST SLOW REV	Display of ON time set by timer	~ 7:30
CLOCK .	-	Display of present time	pm 5:38
SECOND	-	Display of seconds and rightmost digit of present time minute	3:25 8 min. 25 sec.
	SEC RESET	Display for adjusting seconds correctly of present time	5:[][] 5 min. 00 sec.
CLOCK ADJUST	FAST SLOW REV	Display for adjusting hours and minutes of present time	pm12:05

NOTE:

When the unit's power plug is connected to a household AC outlet, the "AM 12:00" or "0:00" time display will wink. It also winks when there has been a power failure while the unit was working and the power has been restored.

4. EXPLODED VIEW

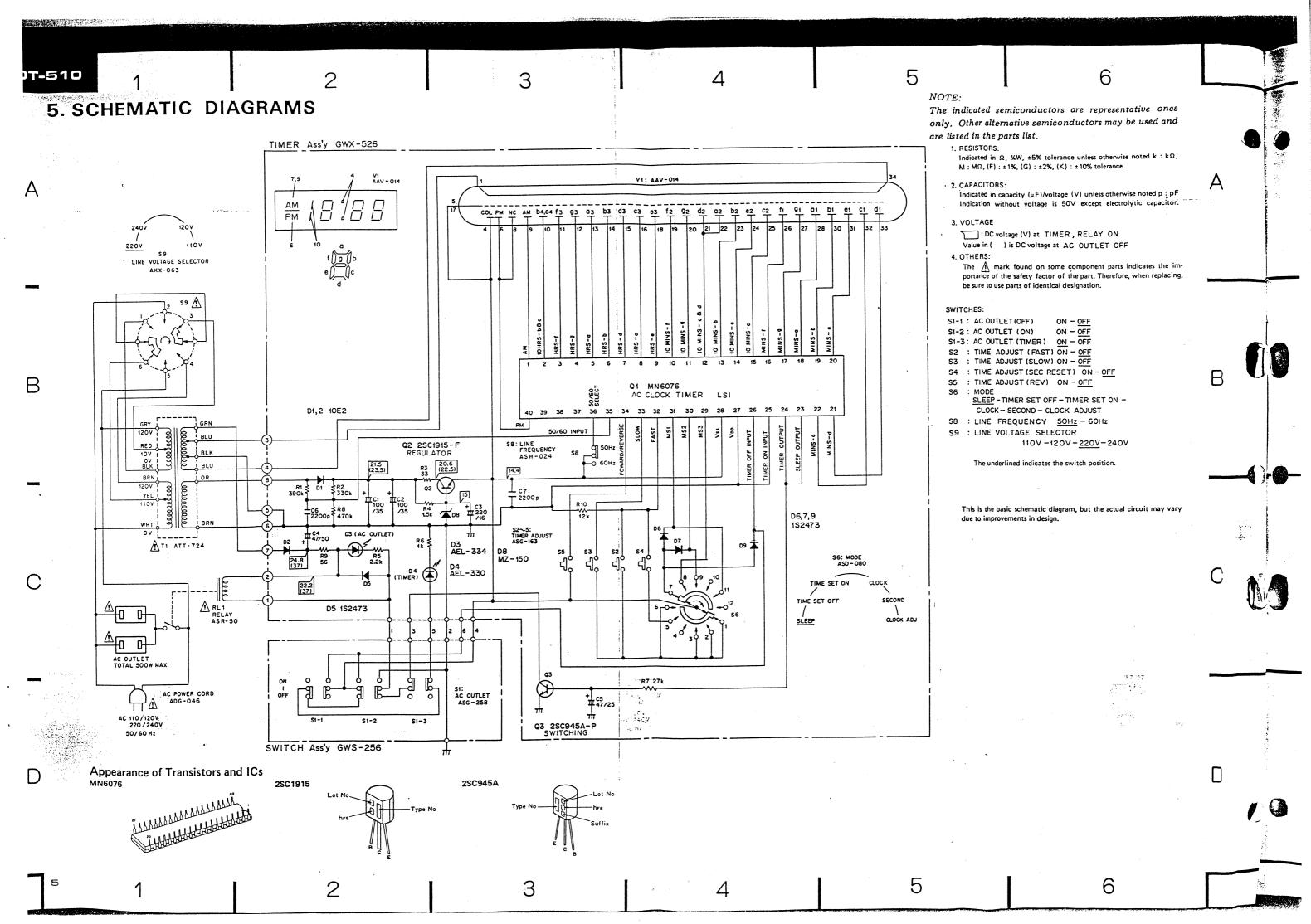


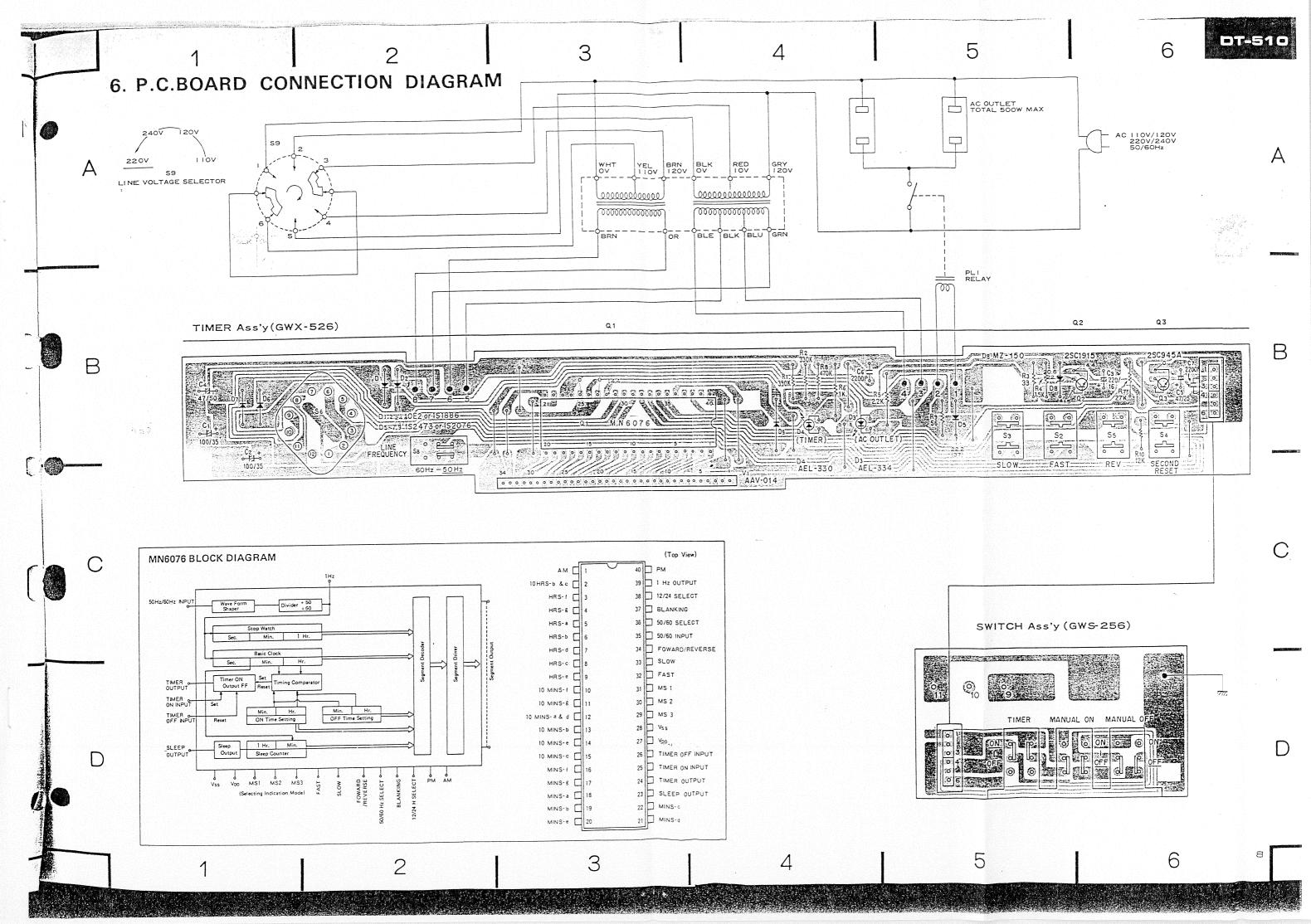
NOTES:

- Parts without part number cannot be supplied.
 The mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Parts List

lark		No.	Part No.	Description	Mark	No.	Part No.	Description
		1.	AEC-609	Foot assembly		16.	AEC-327	Strain relief
		2.	ANM-020	Front panel assembly		17.	MTZ30P100FZK	Screw
		3.	VBZ30P060FMC	Screw		18.	• • • • •	55.677
⚠	*	4.	ATT-724	Power transformer	∧ ★★	19.	AKX-063	Line voltage selector
		5.	PMZ30P060FZB	Screw	_	20.	AKP-040	AC socket (AC OUTLETS)
		6.	AEC-510	Nylon rivet		21.	GWX-526	Timer assembly
		7.	AAB-268	Knob				Timer assembly
		8.	ANR-396	Sub-panel				
		9.	ABN-024	Nut		50.		Plate
<u>.</u>	**	10.	ASR-502	Relay		51.		Chassis
						52.		Rear panel
		11.	AAD-251	Push knob	7 17 NA 12			near paner
		12.	GWS-256	Switch assembly				•
		13.	BBT30P080FZK	Screw				3
		14.	ANE-313	Bonnet case				
3		15.	ADG-046	AC power cord				





Washington Committee of the Committee of

7. PARTS LIST

NOTES:

When ordering resistors, first convert resistance values into code form as shown in

the following examples. Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

561.... RD%PS 5560 J 56 X 101 560Ω 473..... RD%PS 4173 J 47 × 103 $57k\Omega$ OR5 RN2H ORG K 0.5Ω 010 RS1P @II@ K 1Ω

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors). 5621 RN%SR 56620 F 562 × 101

5.62kΩ The A mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★

** GENERALLY MOVES FASTER THAN * This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

7.1 TIMER ASSEMBLY (GWX-526)

SWITCHES

Mark	Part No.	Symbol & [Description	Mark	Part No.	Symbol	& Description
**	ASG-163 ASD-080	S2-S5 S6	Tact switch Rotary switch Slide switch		10E2 (1S1886)	D1, D2	
	ASH-024	\$8	Stide switch	*	AEL-334 AEL-330 1 S247 3	D3 D4 D5D7,	D9
CAPAC					(1S2076) MZ-150	D8	
Mark	Part No.	Symbol & [Description	^	(WZ-150)	20	
	CEA 101M 35L	C1, C2					
	CEA 221M 16L CEA 470M 50L	C3 C4		OTHER			
	CEA 470M 25 L CKDYB 222K 50	C5 C6, C7		Mark	Part No.	Symbol	& Description
				*	AAV-014	V1	Fluorescent indicator tube

RESISTORS

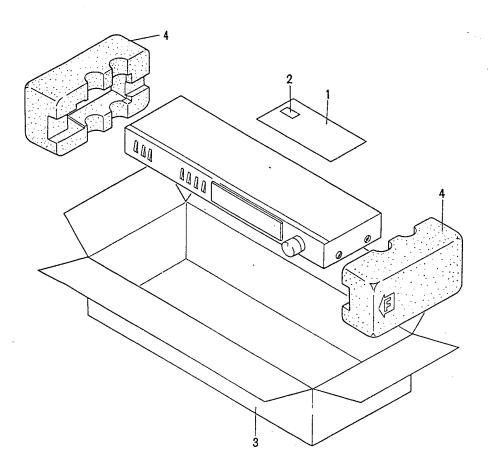
NOTE: When ordering resistors, convert the resistance value 7.2 SWITCH ASSEMBLY (GWS-256) into code form, and then rewrite the part no. as before.

Mark	Part No.	Symbol & Description	Mark	Part No.	Symbol & D	escription	Fait N
	80%PM 000 J	R1_R10~	**	ASG-258	S1	Push switch	80%

SEMICONDUCTORS

Mark	Part No.	Symbol & Description				
**	MN6076	Q1				
**	2SC1915	Q2				
**	2SC945A	Q3				

PACKING



Parts list

Mark No.	Part No.	Description
1.	ARB-409	Operating instructions
2.	AEA-049	Rubber cushion assembly
3.	AHD-909	Packing case
4.	AHA-256	Side pad
5.	AHX-018	Master box

25.25.12.1



AUDIO DIGITAL TIMER

DT-510 KU

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
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- For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .
 - ** GENERALLY MOVES FASTER THAN *

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

	Symbol & Description					
Mark	3y	mbol & Description	S type	S/G type	KU type	Remarks
Ž. 1800.		Timer assembly	GWX-526	GWX-526	GWX-527	
		Switch assembly	GWS-256	GWS-256	GWS-257	
∆ ★★	RL1	Relay	ASR-502	ASR-502	ASR-503	9 .
A **	S9	Line voltage selector	AKX-063	AKX-063		
A ★	T1	Power transformer	ATT-724	ATT-724	ATT-722	
Δ		AC power cord	ADG-046	ADG-046	ADG-052	
		Operating instructions	ARB-409	ARB-409	ARB-410	

2. SPECIFICATIONS

Time display Digital display with fluorescent display tube	Timer accuracyWithin ± 0.1 sec. of time displayed Sleep timer accuracyWithin 59 sec. of set time
Timer type24-hour type	
(AM/PM, 12-hour display)	Power section, others
Timer settingOnly one ON/OFF time setting in mininum units of minutes within a 24-hour period	Power requirements
Sleep timerSetting in minimum units of minutes up to 1 hour 59 minutes	power (500 W for audio equipment) Power consumption
Time accuracySynchronized with line frequency	

Other functions AC OUTLET "on" display (red LED lights) • Timer operation display (green LED lights) Power failure display (time display winks) Dimensions 420 (W) x 50 (H) x 144 (D) mm 16-9/16 (W) x 2 (H) x 5-11/16 (D) in Weight 1.7 kg (3 lb 12 oz)

Accessories

 $\nabla V_{i,j}$

Operating Instructions1

Specifications and design are subject to possible modification without notice due to improvements.

3. PARTS LIST

NOTES:

When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm

and 47k ohm (tolerance is shown by J=5%, and K=10%). 561..... RD%PS 556日 J 473..... RD%PS 4733 J 56 × 101 560Ω

47 × 103 $57k\Omega$ OR5 RN2H ORG K 0.5Ω 010 RS1P @I@ K 1Ω

Ex. 2 When there are 3 effective digits (such as in high precision metal film résistors).

5621RN%SR 5620 F 562 × 101 5.62kΩ

The A mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

For your Parts Stock Control, the fast moving items are indicated with the marks ** and *

 $\star\star$ GENERALLY MOVES FASTER THAN \star

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

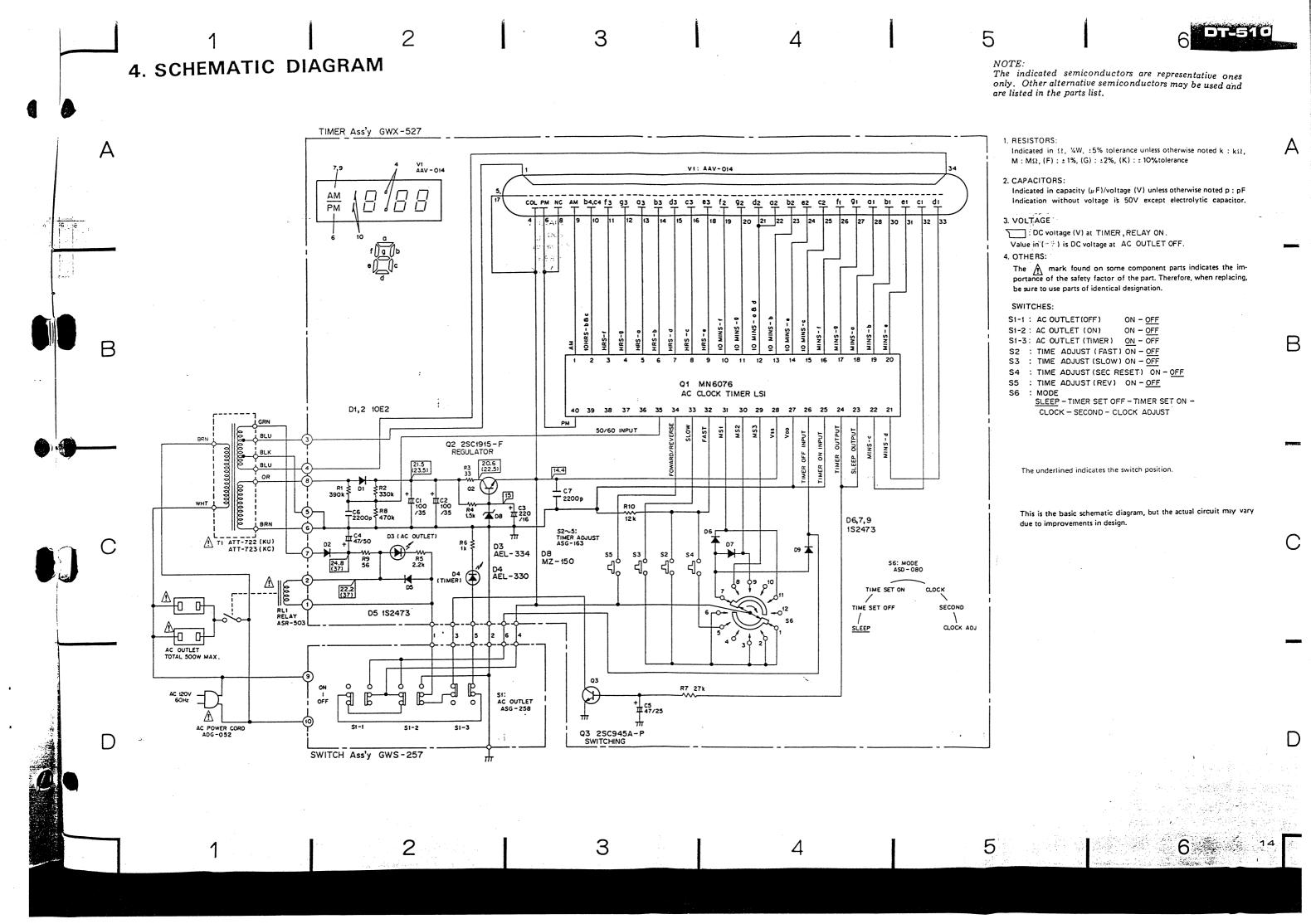
3.1 TIMER ASSEMBLY (GWX-527)

SEMICONDUCTORS

SWITCH	FS			ŧ	Mark	Part No.	Symbol 8	Description
Mark	Part No.	Symbol &	Description		**	MN6076 2SC1915	Q1 Q2	
	ASG-163 ASD-080	S2—S5 S6	Tact switch Roatry switch		**	2SC945A 10E2	Q3 D1, D2	
CAPACITORS				į t	* *	(1S1886) AEL-334 AEL-330	D3 D4	
Mark	Part No.	Symbol & Description			*	1\$2473 (1\$2076)	D5-D7, D9	
	CEA 101M 35L CEA 221M 16L CKDYB 222K 50	C1, C2 C3 C6, C7			*	MZ-150 (WZ-150)	D8	
	CEA 470M 25L CEA 470M 50L	C5 C4			OTHE	R		•
					Mark	Part No.	Symbol	& Description
RESIST	ORS				*	AAV-014	V1	Fluorescent indicator tube

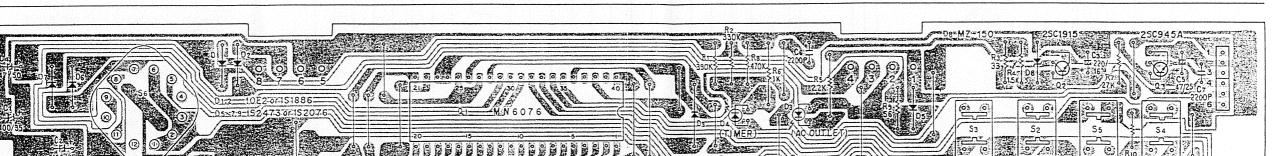
NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before. 3.2 SWITCH ASSEMBLY (GWS-257)

Mark	Part No.	Symbol & Description	Mark	Part No.	Symbol & D	escription
	FD%PM 🗆 🗆 🗆 J	R1-R10	**	ASG-258	S1	Push switch

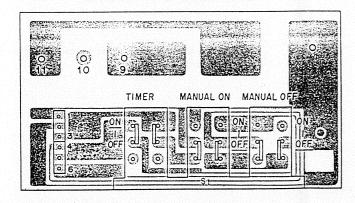


5. P.C.BOARD PATTERNS

Timer Assembly (GWX-527)



Switch Assembly (GWS-257)



Service Manual

ORDER NO. ART-745-0

AUDIO DIGITAL TIMER

DT-510

NE, YB

MODEL DT-510 COMES IN SIX VERSIONS DISTINGUISHED AS FOLLOWS:

Туре	Voltage	Remarks
KU	120V only	U.S.A model
KC	120V only	Canada model
s	110V, 120V, 220V and 240V (Switchable)	General export model
S/G	110V, 120V, 220V and 240V (Switchable)	U.S. Military model
ΥB	240V only	United Kingdom model
NE	220V only	Europe model

- This additional service manual is applicable to the DT 510/YB, NE.
- The basic performance of the DT-510/YB, NE types are the same as the DT-510/S type. Please refer to the DT-510/S type service manual (ART-744) with exception of this supplements.

1. SPECIFICATIONS

Time display Digital display with fluorescent	Other functions
display tube Timer type	AC OUTLET "on" display (red LED lights) Timer operation display (green LED lights) Power failure display (time display winks) Dimensions
Sleep timer accuracyWithin 59 sec. of set time	operating metablishs (English) Serman, French, Italian,
Power section, others Power requirements	NOTE: Specifications and design are subject to possible modification without notice due to improvements.

PIONEER ELECTRONIC CORPORATION 4-1. Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan U.S. PIONEER ELECTRONICS CORPORATION 85 Oxford Drive, Moonachie, New Jersey 07074, U.S.A. PIONEER ELECTRONICS EUROPE) N.V. Luithagen-Haven 9, 2030 Antwerp, Belgium PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia

2. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
- The \wedge mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .
 - ** GENERALLY MOVES FASTER THAN *

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

				Part No.		
Mark	Symbol & Description		S type	YB type	NE type	Remarks
	-	Timer assembly	GWX-526	GWX-525	GWX-525	
		Switch assembly	GWS-256	GWS-255	GWS-255	
<u>^</u>		AC socket (AC OUTLETS)	AKP-040	AKP-044	AKP-026	
	S9	Line voltage selector	AKX-063			
1 ★★	S7	Power switch	• • • •	ASH-501	ASH-501	
★	T1	Power transformer	ATT-724	ATT-726	ATT-713	
∆ ★★ [RL1	Relay	ASR-502	ASR-501	ASR-501	
7		AC power cord	ADG-046	ADG-051	ADG-041	
<u>}</u>	FU1	Fuse (T 2.5A)			AEK-403	
_		Operating instructions	ARB-409	ARD-162	ARD-162	
		Front panel assembly	ANM-020	ANM-031	ANM-031	
		Packing case	AHD-909	AHD-912	AHD-912	

3. PARTS LIST

3.1 TIMER ASSEMBLY (GWX-525)

Mark	Part No.	Symbol &	Symbol & Description		
	ASG-163 ASD-080	S2—S5 S6	Tact switch Rotary switch		

CAPACITORS

Mark	Part No.	Symbol & Description		
	CEA 101M 35L	C1,C2		
	CEA 221M 16L	C3		
	CEA 470M 50 L	C4		
	CEA 470M 25L	C5		
	CKDYB 222K 50	C6,C7		

RESISTORS

NOTE: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Mark	Part No.	Symbol & Description
	ВО%РМ ПППЛ	R1R10

SEMICONDUCTORS

Mark	Part No.	Symbol & Description	
**	MN6076	Q1	
**	2SC1915	Q2	
**	2SC945A	O3	
*	10E2 (1S1886)	D1,D2	
*	AEL-334	D3	
*	AEL-330	D4	
*	1S2473 (1S2076)	D5-D7,D9	
. *	MZ-150 (WZ-150)	D8	

OTHER

Mark	Patt No.	Symbol & Description		
*	AAV-013	V1	Fluorescent indicator	
			tube	

3.2 SWITCH ASSEMBLY (GWS-255)

Mark	Part No.	Symbol & Description		
**	ASG-258	S1	Push switch	

NOTE:

5

The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

6

